














Engineering with Toolkit

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Overview Toolkit Tools

ArcGIS Tools	Icon	Purpose
Zoom to Plan		<ul style="list-style-type: none"> Zooms to the extent of the customer's planned land units.
Select a Plan		<ul style="list-style-type: none"> Adds the customer's plan layers, including planned land units and practice layers, to the view.
Import Legacy Shapefiles		<ul style="list-style-type: none"> Allows users to import existing land unit shapefiles into the Toolkit 2004 geodatabase.
Total Acres		<ul style="list-style-type: none"> Calculates the acres of one or more polygons such as fields, ponds or easements. Provides the total length of the perimeters. Calculates lengths for line features such as fence or pipelines and give a total count for the number of features selected for any layer type (point, line or polygon).
Map Products		<ul style="list-style-type: none"> Creates a map with a heading, a legend, a scale bar, and a north arrow.
Map Labels		<ul style="list-style-type: none"> Allows user to create labels for all vector layers.
Soils Map/Inventory		<ul style="list-style-type: none"> Creates a soils map for a customer's land units and provides a soils inventory report for the selected area.
Buffer		<ul style="list-style-type: none"> Draws a polygon of a specified width either inside or outside of an area or around a point or line. Allows buffers to be created on one side of a line.
Attribute Tool		<ul style="list-style-type: none"> Inputs information about various layers into the corresponding table including Land Units, Practice Layers and Resource Inventory layers.
New Toolkit Layer		<ul style="list-style-type: none"> Creates new layers including Planned Land Units, Practice and Resource Inventory Layers. Builds new layers and adds them to the view.
Toolkit Digitizer		<ul style="list-style-type: none"> Allows a user to add or edit features for any type of layer.
Digitizing Off		<ul style="list-style-type: none"> Indicates that the digitizing (i.e., Edit Mode) is off.
Digitizing On		<ul style="list-style-type: none"> Indicates that the digitizing is in Edit Mode.

Starting Toolkit and Transferring the Customer

Double click Toolkit 2004 Icon

Type Farm # in the Business ID Field or Tract #.

Customer Service Toolkit

File Tools Reports Help

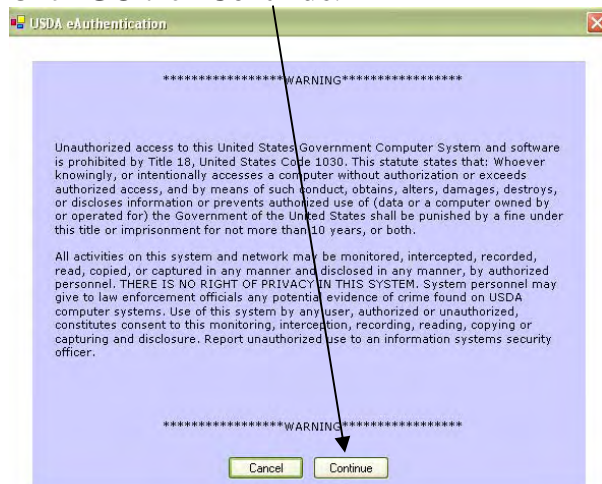
Check In/Out Folders

Search the National Conservation Planning Database for your service area

County: NODAWAY Customer or Business Name: Clear GO

Business ID: Tract Number:

Click **GO** then **Continue**.



You need to login with your *eAuthentication* log-in and password

Select the customer in the left window, click **Check Out**

Customer Service Toolkit

File Tools Reports Help

Check In/Out Folders

Search the National Conservation Planning Database for your service area

County: NODAWAY Customer or Business Name: Clear GO

Business ID: 1238 Tract Number:

National Conservation Planning Database

Status	Owner	Customer Name	Customer File
free	A & M HOLDINGS	VA_M_HOLDINGS,LLC--57	
free	DALE V OWENS	VA_Plan_Realty,Inc--6006	
free	JIM ABRAMS	Abzams_Jim--3918	
free	THOMAS ACKLE	Vackley_Thomas--881	
free	DONNA ACKLIN	Vacklin_Donna--4954	
free	HOWARD ACKLIN	Vacklin_Howard_I,Janet--670	
free	KENNETH H ACK	Vacklin_Kenneth--1001	
free	RANDY R ACKLIN	Vacklin_Randy_I,Boone--4231	
free	RANDY R ACKLIN	Vacklin_Randy--3342	
free	DAVID K ACKMA	Vackman_Leslie_D,David_K--	
free	ROBERT L ADAM	Vadams_Robert_L--939	
free	GARY L ADKINS	Vadkins_I,Larson--1301	
free	GARY L ADKINS	Vadkins_Gary,Vide_I,May,Jane--	
free	GREGORY N AD	Vadkins_Gingray_N,I,Jon,K--	
free	GREGORY N AD	Vadkins_Gingray_N,I,Jon,K--	
free	KEVIN ADKINS	Vadkins_Kevin--3808	
free	KEVIN ADKINS	Vadkins_Kevin--3808	
free	RUSSELL ADKIN	Vadkins_Russell_I,Matanne--	
free	DAFRIN ADWELL	Vadwell_Darin--677	
free	DEAN ADWELL	Vadwell_Dean & Norma--3579	

2430 records returned

My Checked Out Folders

Status	Owner	County	Customer Name	Customer File
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Check Out

< Check In

<< Check In All

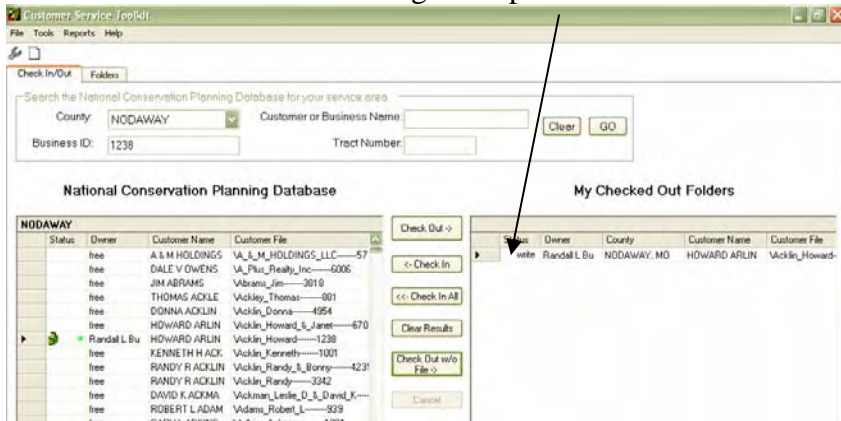
Clear Results

Check Out w/o File >

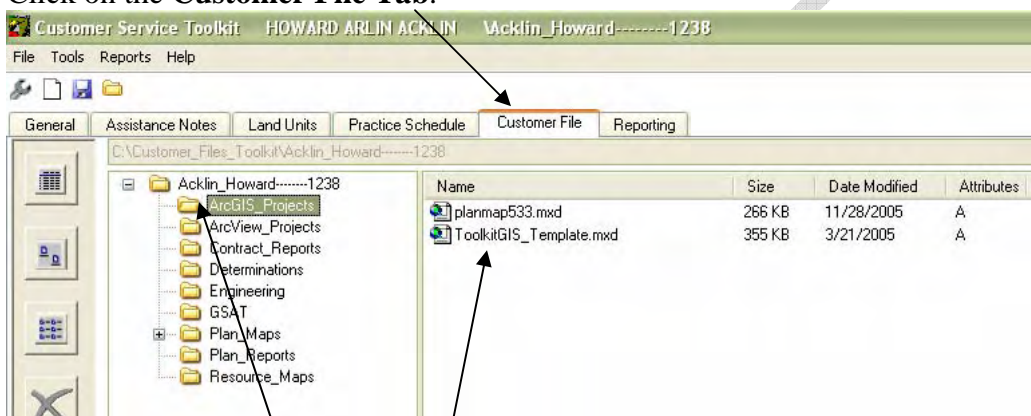
Cancel

Randall L Buck AUTHENTICATED

Double click the customer on right to open



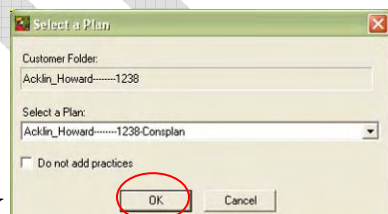
Click on the **Customer File Tab**.




Single click **ArcGIS_Projects**

Double click **ToolkitGIS_Template** or appropriate project to start ArcMap.

Click on **Cyber Farmer** .



Select the plan and click **OK**.

Click on  **Zoom In** button then click and draw box around tract that you are working with.

Note: If no plan exist click on New Toolkit Layer “Hardees Star”. Click on Planned Land Units then Link to Existing Plan. Click OK. Choose source layer (usually the common land unit layer) query by Farm # click search then OK When the editor bar comes up click on Editor then Stop Editing

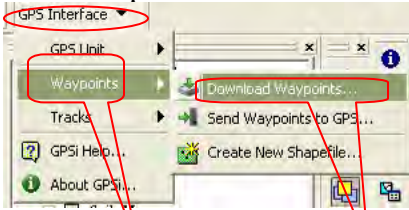
DOWN LOADING DNR GARMIN GPS DATA

Insert Tech Note MO-1 after it's revised.

DRAFT

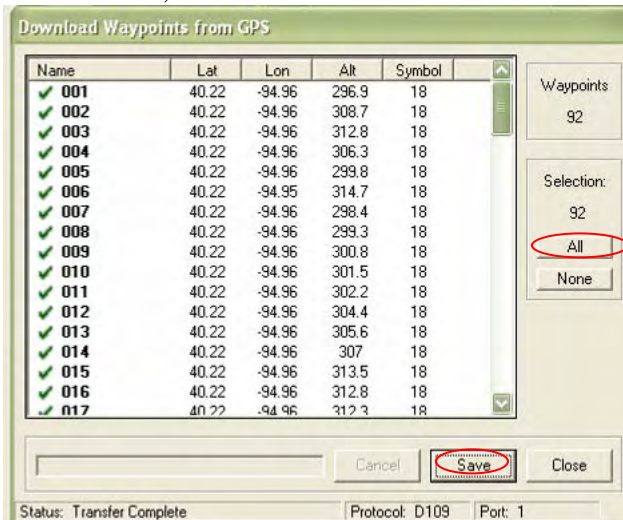
GPSi HANDOUT

In ArcMap click on **GPS Interface**.



Select **Waypoints** then **Download Waypoints...**

Click on **All**, then **Save**.



Check the file location **O:\toolkit customer\Resource_Maps**

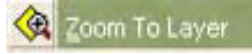
OR

C:\Documents and Settings\randall.buck\My Customer Files Toolkit\toolkit customer\Resource_Maps

Enter File name (such as Structure Waypoints 2007).

DRAWING POOL AREAS

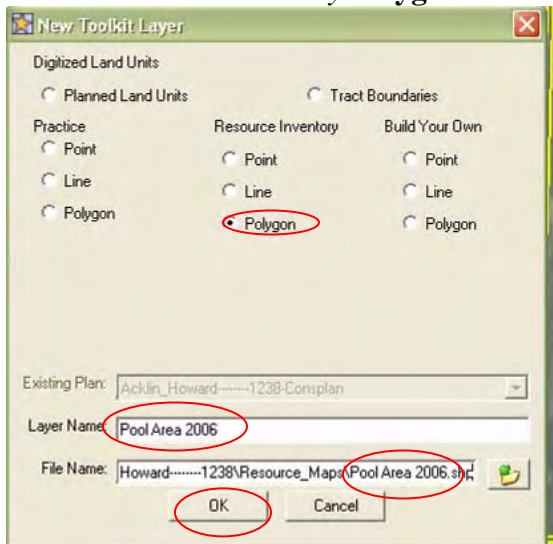
Right click on *GPS waypoint file* in the table of contents and select



Set scale to 1:4800

Click on  New Toolkit Layer

Select *Resource Inventory Polygon*.



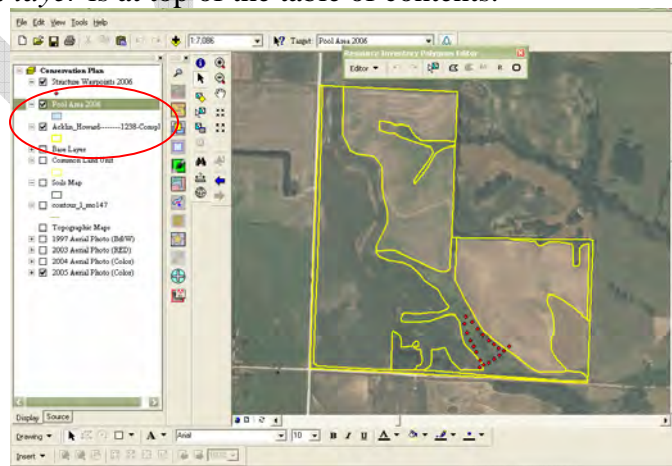
Change *Layer Name* to **Pool Area 2007**.

Then with mouse, highlight **Pool Area 2007** you just typed, then on the keyboard type **Ctrl + C**

Then highlight "**res_inv_poly**" in the *File Name* then **Ctrl + V** to paste, then click **OK**.

Drag *Resource Inventory Polygon Editor* out of the way.

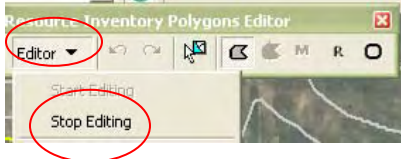
Be sure the *GPS point layer* is at top of the table of contents.



Click on  **Add Feature Button** on the Editor bar to draw first polygon.

Note: When drawing pool areas start at *highest* contour then work your way down. Draw the *largest* first. Instead of double clicking to complete a polygon left click *once* on last point then *right click* off last point and *finish sketch*. Repeat for each additional contour.

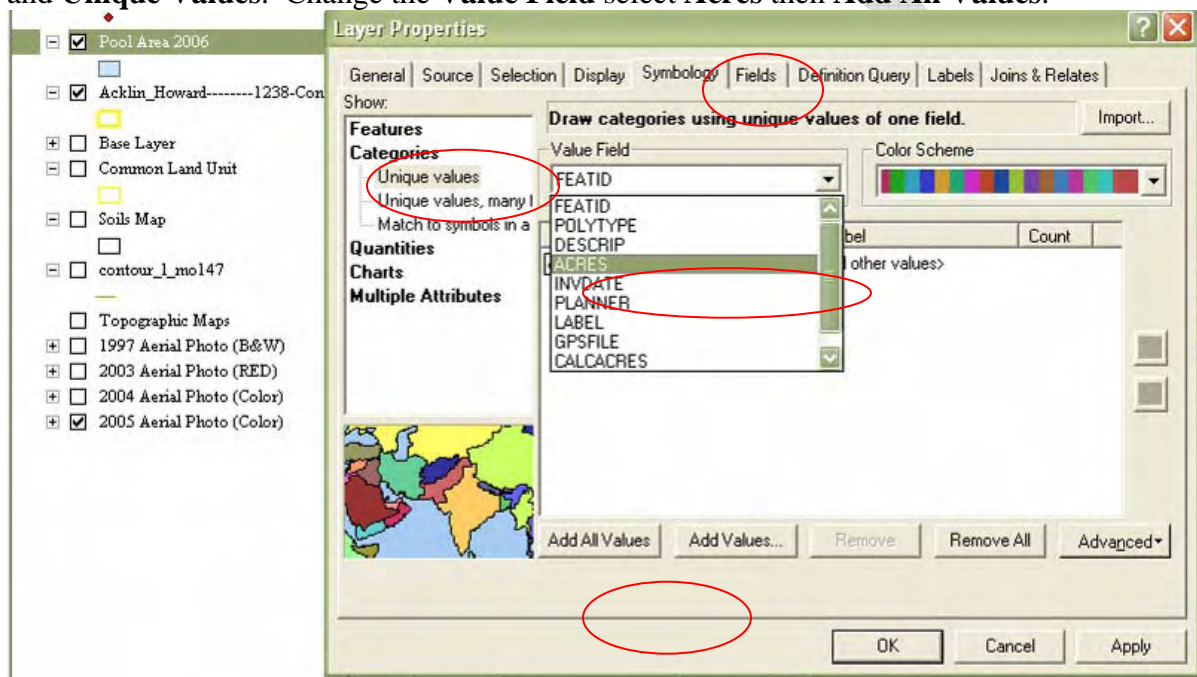
When done editing polygons click on the **Editor** pull down and **Stop Editing**.



When asked *Do you want to save your edits?* **Yes**

To Calculate Area

Double click on *Pool Area 2006* in the table of contents, click on the **Symbology** Tab, then click on **Categories** and **Unique Values**. Change the **Value Field** select **Acres** then **Add All Values**.



Then **OK**.

Right click on the layer name in the table of contents and click on **Save Symbology**.

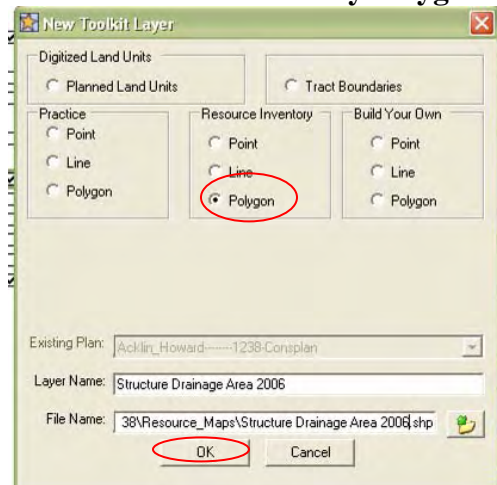
DRAWING DRAINAGE AREAS

Set scale to 1:4800

Turn on **Topographic Maps** or **Contour Lines**.

Click on  **New Toolkit Layer**.

Select **Resource Inventory Polygon**.



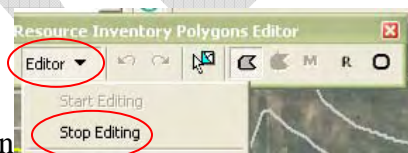
Change Layer Name to **Structure Drainage Area Date**

Highlight *Layer Name* then **Ctrl + C**, “Copy”.

Highlight *res_inv_poly* in the *File Name* then **Ctrl + V**, “Paste”.

Click **OK**.

Click on  **Add Feature Button** and draw polygon, this time double click to end.

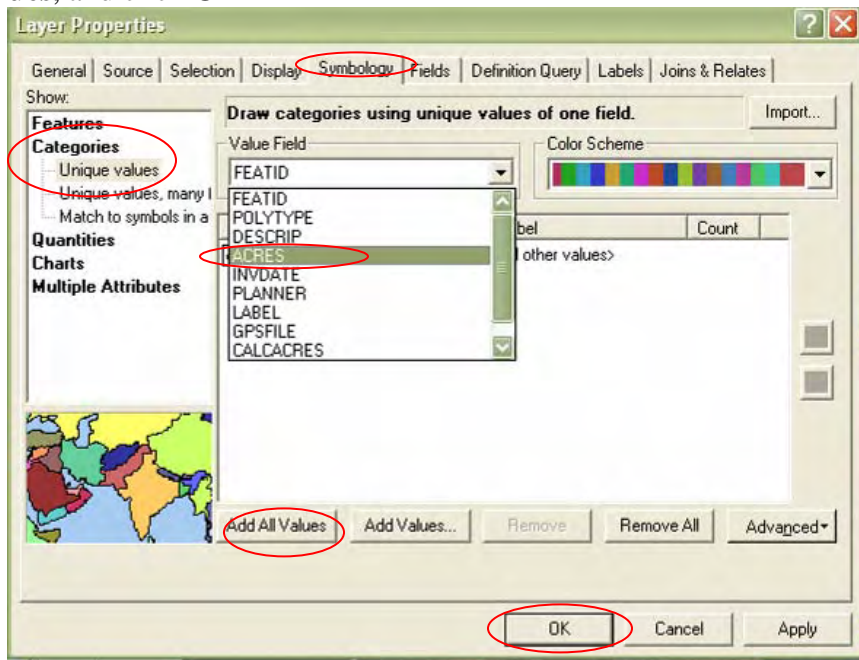


Click on the **Editor** pull down. Select **Stop Editing**

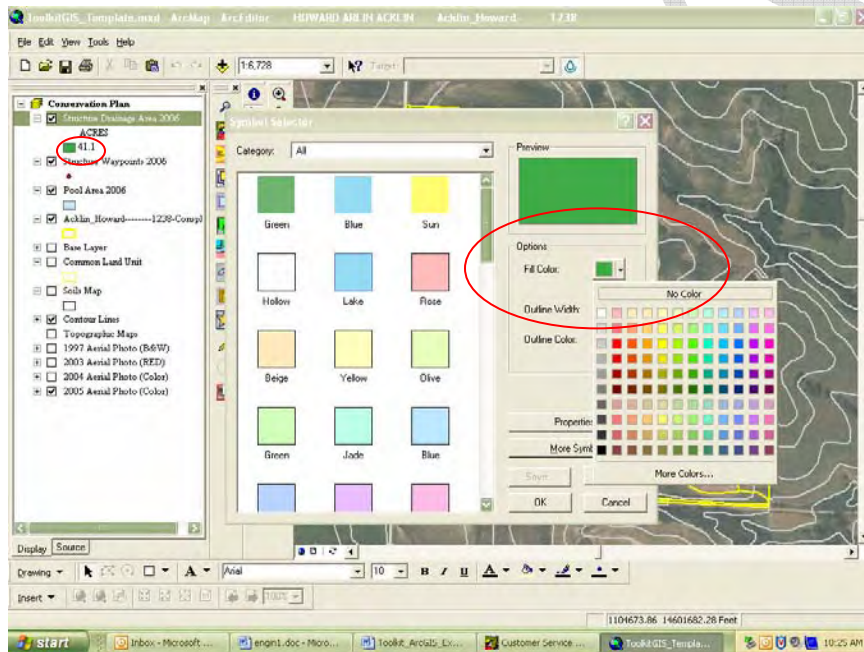
Save Edits. Yes.

Double click on **Structure Drainage Area 2007** in the *Table of Contents* to open *Layer Properties* window.

Symbology tab, then select **Categories, Unique Value**. Change the *Value Field* to **Acres**, click on **Add All Values**, and click **OK**



To make hollow Fill Color click once on the *SYMBOL* next to the drainage area number



In *Options* change the *Fill Color* to **No Color** and *Outline Width* to **1.5** and *Outline Color* to a bright contrasting color.

Click **OK**

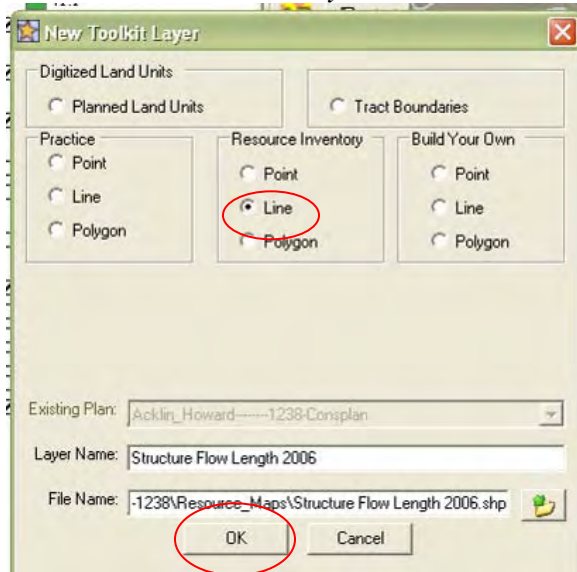
Right click on the layer name and click on **Save Symbology**

Drawing Flow Length

Set scale to 1:4800

Click  New Toolkit Layer

Select *Resource Inventory* and **Line**



Change *Layer Name* to **Structure Flow Length Date**

Highlight the *Layer Name* you just typed and press **Ctrl + C**

Highlight **res_inv_line** in the *File Name* press **Ctrl + V**

Click **OK**

Drag *Resource Inventory Line Editor* bar out of the way

Click on  **Add Feature** button

Then draw in flow length be sure to double click to end

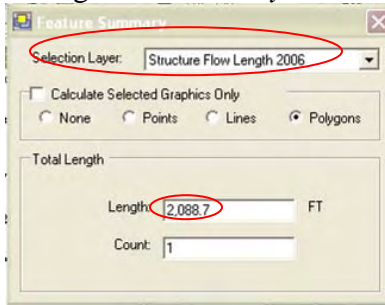
Click on **Editor** then **Stop Editing**



Do you want to save your edits? **Yes.**

To measure flow length click on  **Feature Summary** button

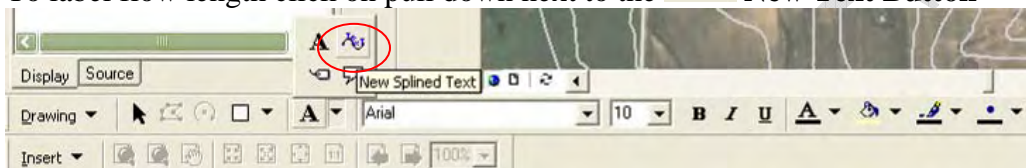
Change *Selection Layer* choose *Structure Flow Length Date* then click on flow length line in *Data View*



Use cursor to highlight *Length* **Ctrl + C**

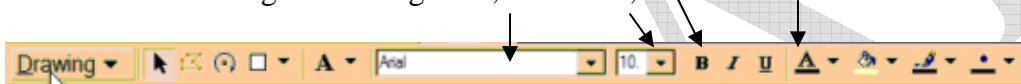
Click on **X** to close window

To label flow length click on pull down next to the **New Text Button**



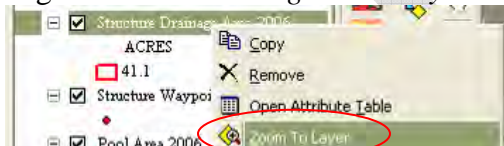
Select **New Spined Text** then click once to draw line along flow line and double click to end when text box appears press **Ctrl + V** then **Enter**

Note: You can change text using Font, Font Size, Bold and Colors



Click on **Clear Selected Features** button to make the flow line appear correct color.

Right click on *Drainage Area Layer* in the Table of Contents and **Zoom to Layer**

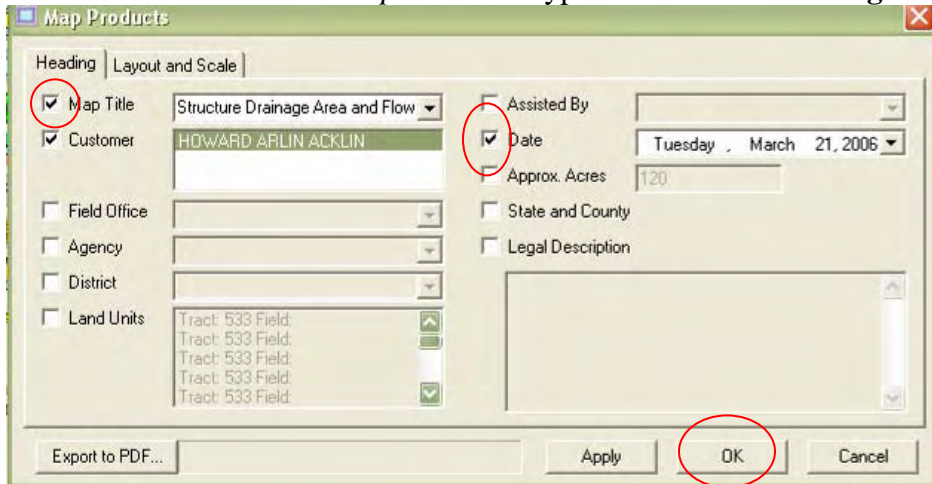


Printing Drainage Area and Flow Length Maps

Un-check the *Pool Area Layer* so it is not visible and set scale so you see your entire map area.

Click on the  **Map Products Button**

Place *check* in box left of *Map Title* then type in **Structure Drainage Area and Flow Length**

The image shows the 'Map Products' dialog box with two tabs: 'Heading' and 'Layout and Scale'. The 'Heading' tab is active. On the left, there are several checkboxes: 'Map Title' (checked), 'Customer' (checked), 'Field Office' (unchecked), 'Agency' (unchecked), 'District' (unchecked), and 'Land Units' (unchecked). The 'Map Title' field contains 'Structure Drainage Area and Flow'. The 'Customer' field contains 'HOWARD ARLIN ACKLIN'. On the right, there are more checkboxes: 'Assisted By' (unchecked), 'Date' (checked), 'Approx. Acres' (120), 'State and County' (unchecked), and 'Legal Description' (unchecked). The 'Date' field shows 'Tuesday, March 21, 2006'. At the bottom, there are buttons for 'Export to PDF...', 'Apply', 'OK' (circled in red), and 'Cancel'.

Place *check* in box left of *Date* click **OK**

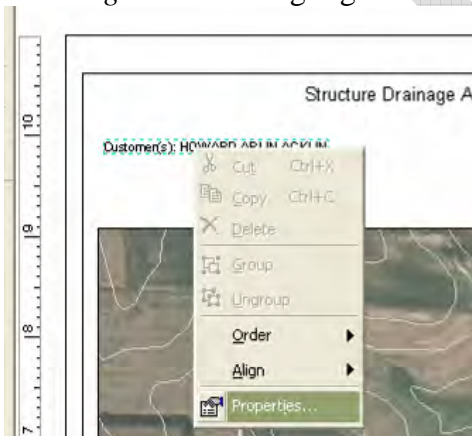
Do you want to save the map?

(A PDF map will be generated and exported to the resource maps folder in the customer's folder)

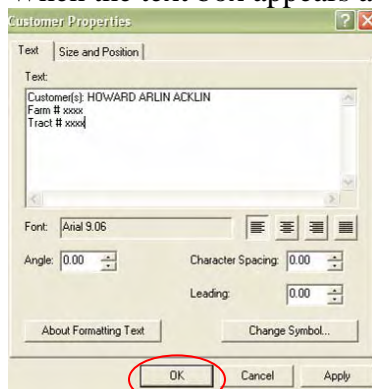
Choose **No**

Note: You will want to change the layout. After you have made you changes you may want to export the layout to save a copy.

Two single clicks to highlight customers name and right click select **Properties**.

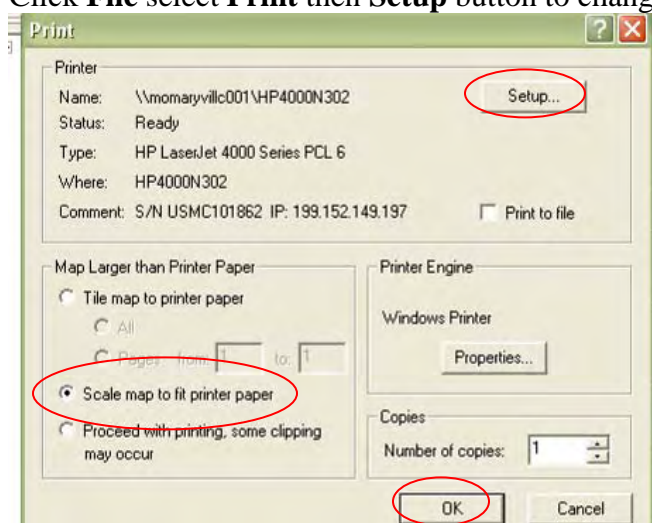


When the text box appears add the Tract and Farm numbers click **OK**



* Note: you may need to adjust the placement of the legend and scale bar.

Click **File** select **Print** then **Setup** button to change printer if necessary and click **OK**



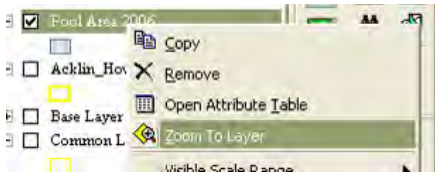
Select **Scale Map to fit printer paper** click **OK**

(Note: If you are printing your map at a specific scale you will click on *Proceed with printing, some clipping may occur*)

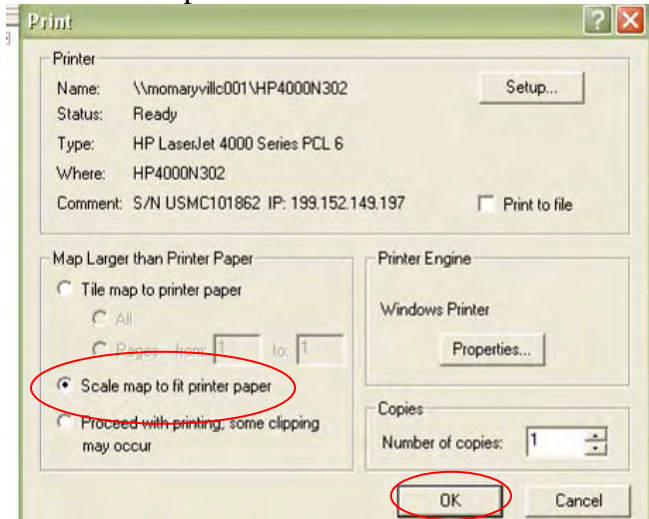
To print a Pool Area Map

Uncheck the Topographic or Contours layers and the Drainage Areas and Flow Length layers.

Place check next to the Pool Areas Layer and **right click** on the layer and select **Zoom to Layer**

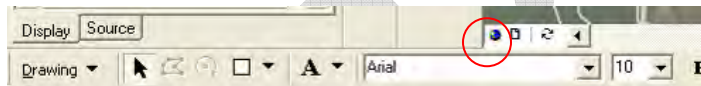


Click on **File** pull down the select **Print**




Scale Map to fit printer paper then click on **OK**

Click on the *Data View* Button

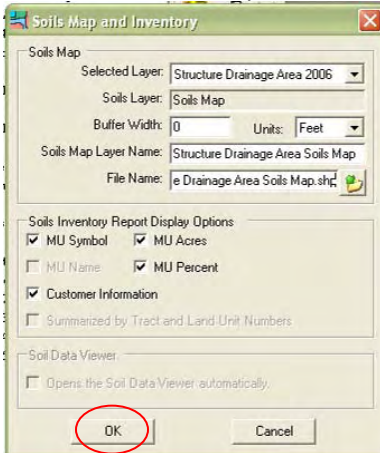


Drainage Area Soils

Uncheck Pool Areas Layer turn on Drainage Area layer. Right click on Drainage Area layer and  Zoom To Layer

Click on  Soils Map and Inventory button

Set the *Selected Layers* to **Structure Drainage Area** layer



Change *Soils Map Layer Name* to **Structure Drainage Area Soils Map** highlight the layer name you just typed and press **Ctrl + C** “Copy”

Click in the *File Name* and highlight soils_map_out(1) then press **Ctrl + V** “Paste”

Click **OK**

To print the *Inventory Report* click on the **File** pull down and select **Print** then **OK**

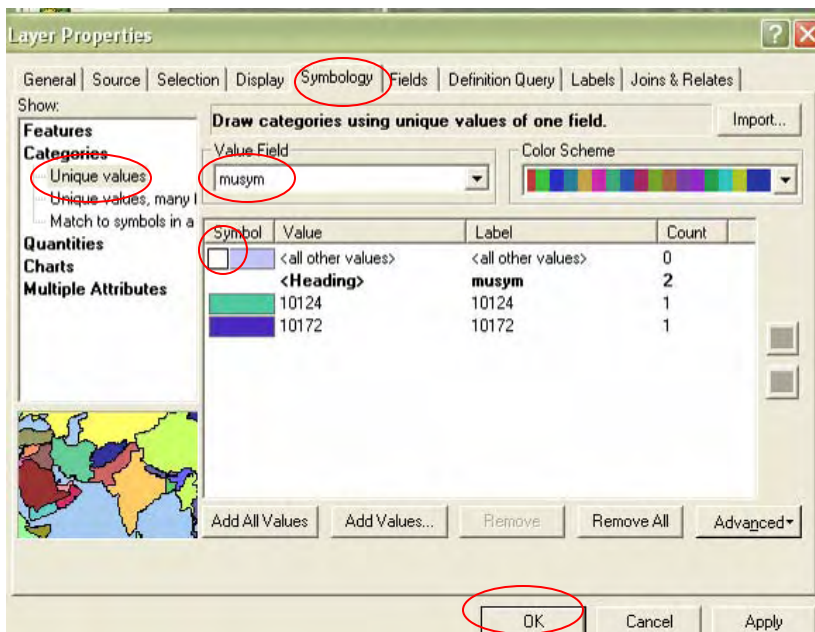
Click on the **X** in the upper right to close the browser.

* Note this file is automatically saved as an HTML file in the Resource Maps folder

Click on the *ArcMap* project at the bottom of your screen

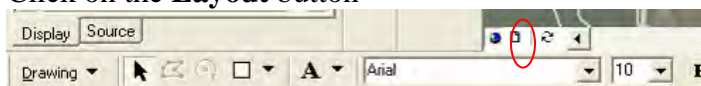
Double click on the Drainage Area Soils Map Layer to open the properties window

Symbology tab, select **Categories**, **Unique Value** change the *Value Field* to **MUSYM**



Click on **Add All Values** uncheck **<all other values>** then click **OK**

Click on the **Layout** button

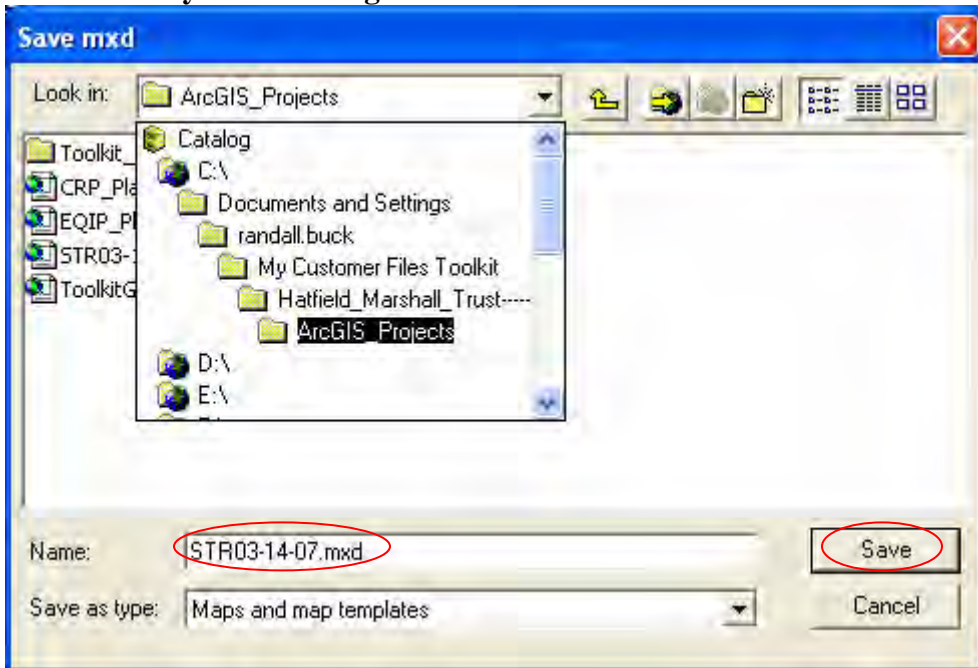


Click on **File** pull down the select **Print** to print the layout.

Saving the Project

Click on the **File** pull down then select **Save As...** enter a descriptive name i.e. **Structure Tract Date** (Structure T1234 2006) then click **Save**

*** Make sure you are saving to the correct customers folder.**

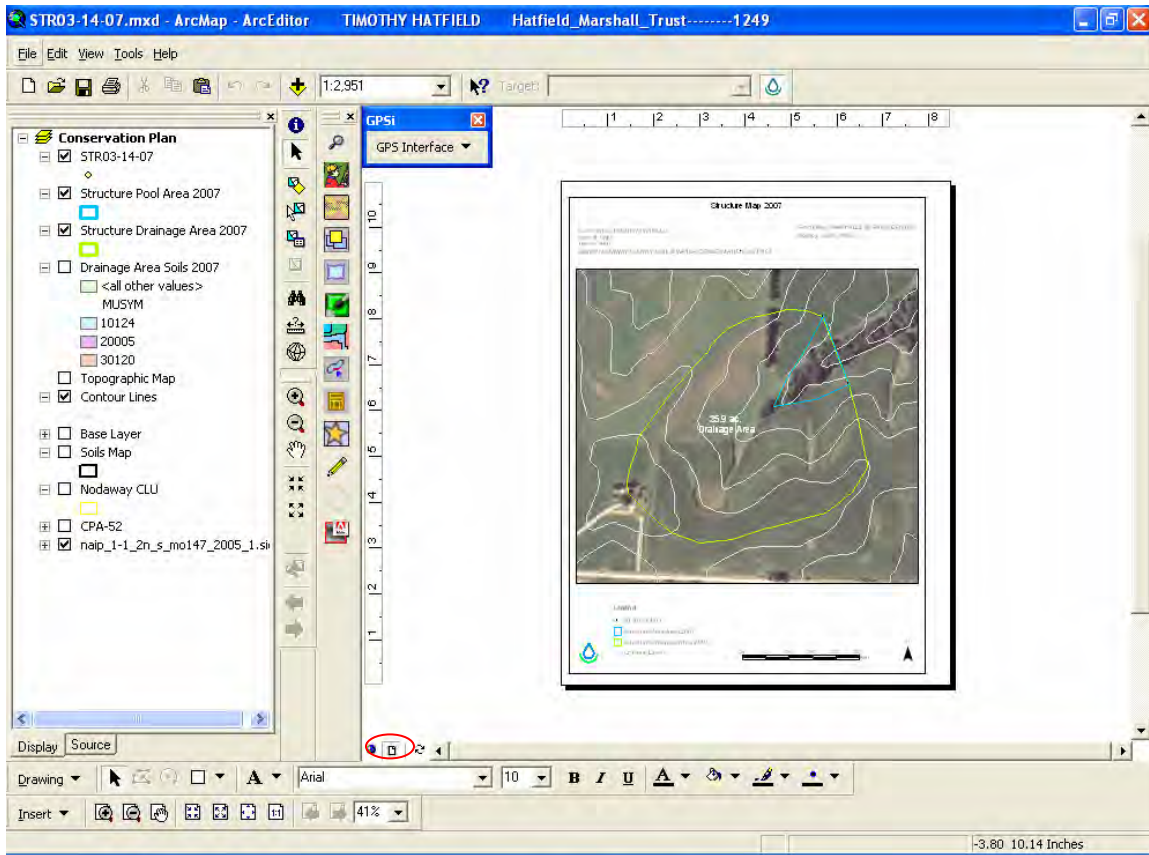


To close ArcGIS click on the red **X** in the upper right

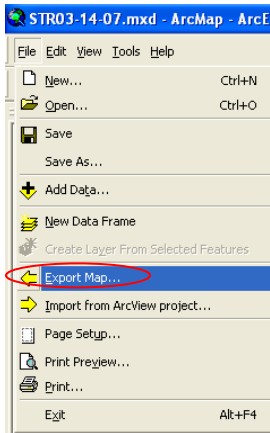
Close the customer by clicking on the black **X** then select the customer on the right and check them back in.

Transferring Layout to Engineering Plan View

If not in Layout view click on Layout button



Click on **File** then Export Map

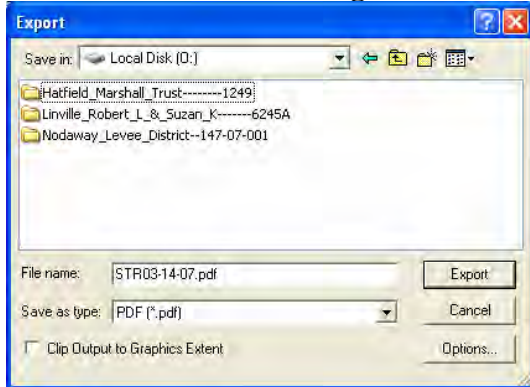


* Make sure you are Exporting to the correct customers folder.

O:\toolkit customer\Resource_Maps

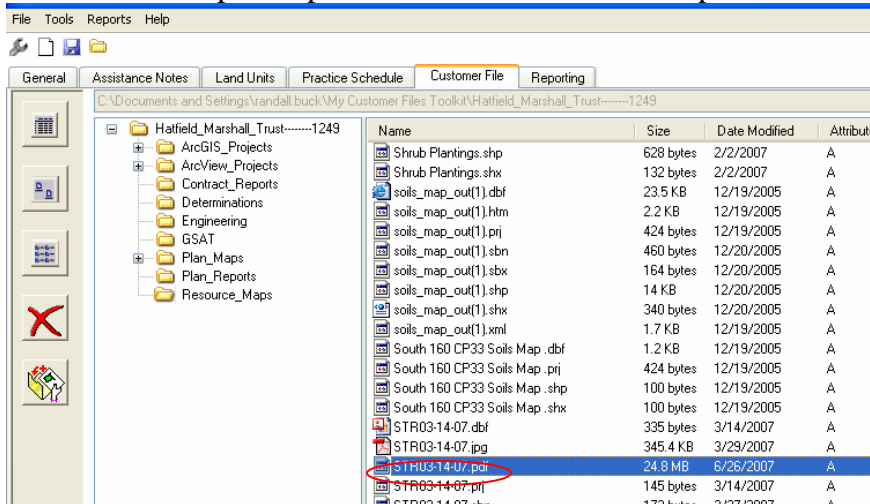
OR

C:\Documents and Settings\user name\My Customer Files Toolkit\toolkit customer\Resource_Maps

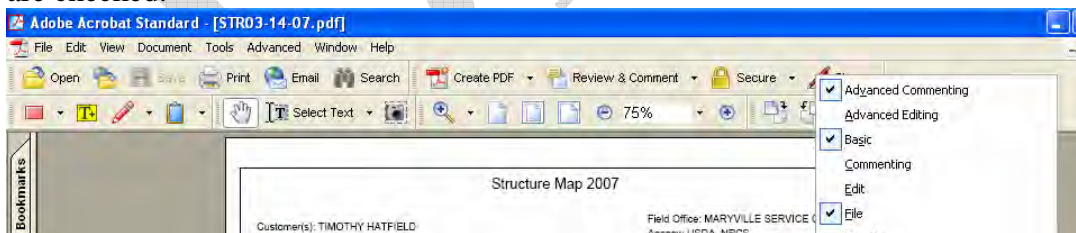


Then **Export**

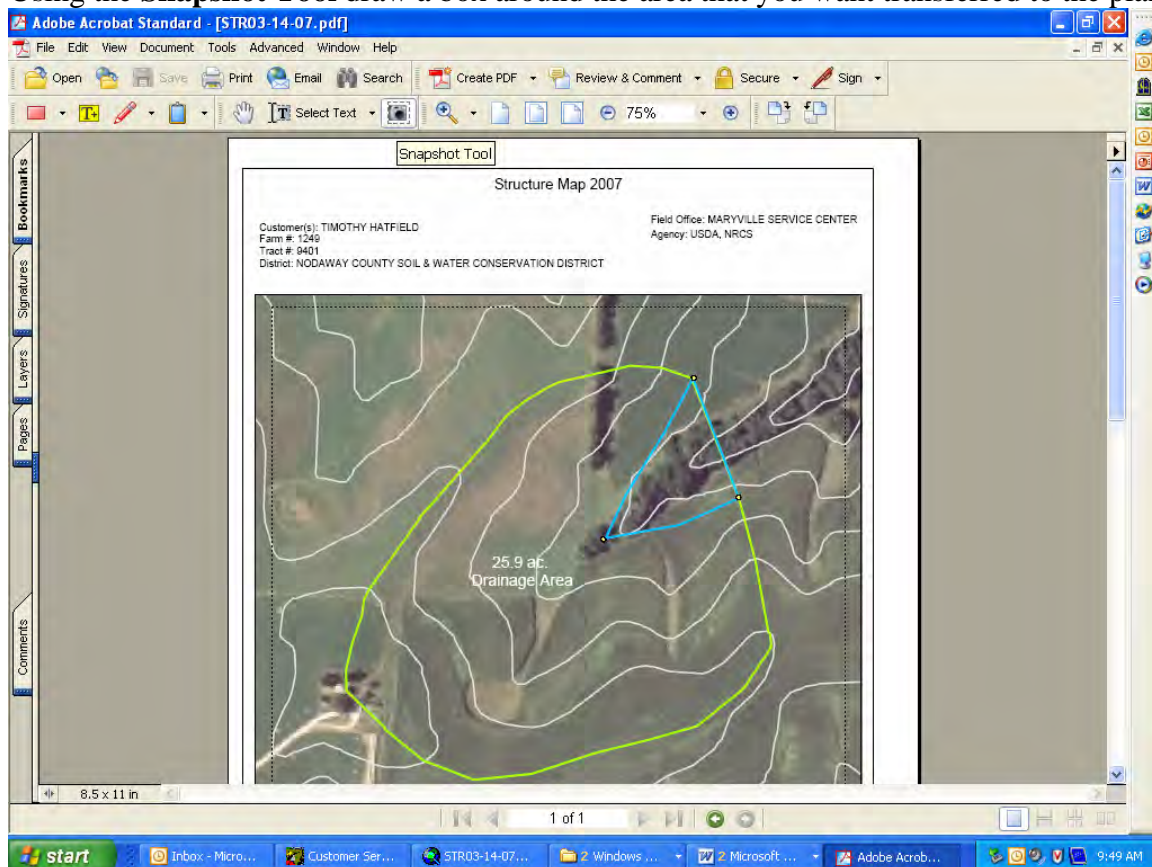
Then find the exported pdf file and **Double Click** to open the file in Adobe Acrobat



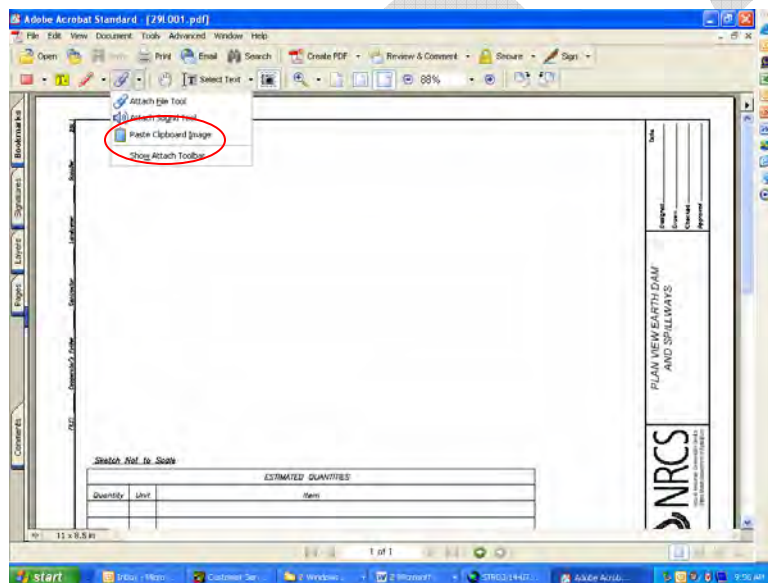
Once Adobe is open **Right Click** in the gray area at the top. Make sure that **Advanced Commenting** and **Basic** are checked.



Using the **Snapshot Tool** draw a box around the area that you want transferred to the plan view



Then open the fillable 29L001.pdf and click on the **Paste Clipboard Image**



Then print to color printer and save this to

O:\toolkit customer\Engineering

OR

C:\Documents and Settings\user name\My Customer Files Toolkit\toolkit customer\ Engineering